IN THE SPECIFICATION:

Please amend the paragraph starting at page 1, line 14 as follows.

--Ink-jet recording systems are designed to cause micro-droplets of a recording liquid such as ink to be ejected ~~fly~~ and eventually adhere to a recording medium such as a sheet of paper in order to record an image that may be an image of a character on the recording medium. A variety of operational principles have been proposed to date for ink-jet recording systems. The ink-jet recording system is advantageous in terms of high speed operation, low noise emission, capability of multi-color printing, versatility for producing recording patterns and absence of a ~~needlessness of~~ developing process. Therefore, ink-jet recording systems have become increasingly popular and are currently used not only for the output units of stand-alone printers but also for those of copying machines, word processors, fax machines, plotters and other information devices. Additionally, as a result of the commercial availability of low cost and high performance digital cameras, digital video recording machines, scanners and other similar devices and the popular use of personal computers in recent years, printers combined with an ink-jet recording system have been widely used as output units for outputting image information from such devices.--

Please amend the paragraph starting at page 2, line 11 as follows.

--With the above described background, there is a strong demand for outputting multi-color images comparable to those obtained by silver salt photography or gravure printing in an easy way ~~ways~~ by means of an ink-jet recording system.--

Please amend the paragraph starting at page 2, line 22 as follows.

--Various recording media have been proposed to date in the field of ink-jet recording. For instance, Japanese Patent Application Laid-Open No. 52-9074 ~~52-9077~~ describes a recording medium comprising an ink-receiving layer mainly made of particles of silica-based pigment having a large specific surface area and containing voids therein in order to improve the ink absorbing rate of the recording medium. Japanese Patent Application Laid-Open No. 58-110287 ~~63-22997~~ discloses a recording medium in which the voids of the pigment layer which forms an ink-receiving layer are regulated. Japanese Patent Application Laid-Open Nos. 55-51583 and 56-157 describe techniques of adding non-crystalline silica powder in order to improve the ink absorptivity of the ink-receiving layer and obtain high print density and printed dots that are free from bleeding.--

Please amend the paragraph starting at page 3, line 23 as follows.

--Additionally, Japanese Patent Application Laid-Open No. 11-1060 describes a recording medium comprising an ink-receiving layer formed by sequentially providing a porous layer containing barium sulfate and a layer containing non-oriented alumina hydrate in order to increase the ink absorbing rate and prevent the generation of ~~beadings~~ beading. The recording medium proposed in the above patent document provides an excellent printing quality.

Please amend the paragraph starting at page 4, line 17 as follows.

--The inventors of the present invention have made ~~paid~~ intensive efforts in an attempt to obtain ~~for obtaining~~ a recording medium having a recording performance comparable

to those of the above cited prior art by using particles of crystalline aluminum oxide in order to improve the surface strength of the ink-receiving layer that normally contains alumina hydrate with a pseudo-boehmite structure. To date, any recording medium comprising a layer containing particles of crystalline aluminum oxide can produce only poorly glossy images. While the surface gloss of the ink-receiving layer containing aluminum oxide of a recording medium may be improved to a certain extent when the layer is subjected to a process for physically smoothing the ~~surface~~ surface, typically by means of a super-calender, the ink absorptivity of the layer can become degraded by the process. This is the reason why the use of aluminum oxide has attracted less attention than that of alumina hydrate with a pseudo-boehmite structure for the ink-receiving layer of a recording medium for ink-jet recording.--

Please amend the paragraph starting at page 7, line 9 as follows.

--In another aspect of the invention, there is provided a method of manufacturing a recording medium comprising a base material and an ink-receiving layer provided on the base material and containing a particulate material, comprising:

producing a coating layer by applying a coating solution containing the particulate material containing particles of crystalline aluminum oxide to the base material followed by drying;

applying water to the coating layer to cause swelling and pressing the surface of the swelled coating layer against a heated mirror-surface drum to produce the ink-receiving layer so as to have a specular gloss of the surface thereof not less than 20% as measured at 20°.--

Please amend the paragraph starting at page 8, line 8 as follows.

--According to the invention, a considerably high gloss of not less than 20% can be obtained on the image-forming surface of a recording medium as measured at 20°. Therefore, the texture and the quality of the image formed on a recording medium according to the invention are comparable to those of any image obtained by silver salt photography. Accordingly, an image that is comparable to or ~~excels any~~ better than an image obtained by silver salt photography in terms of texture and image quality can be printed by means of a process that is ~~by~~ far ~~more simple~~ simpler and of higher speed than the silver salt photography process when a recording medium according to the invention is combined with an ink-jet recording system for an output system.--

Please amend the paragraph starting at page 8, line 24 as follows.

--A recording medium according to the invention comprises a base material and an ink-receiving layer provided on the base material, wherein the side of the recording medium having ~~of~~ the ink-receiving layer ~~of the recording medium~~ serves as a recording surface. The ink-receiving layer is a porous layer containing crystalline aluminum oxide particles as a principal ingredient. A recording liquid supplied to the recording medium from a recording apparatus is absorbed by the ink-receiving layer.--

Please amend the paragraph beginning at page 9, line 15 as follows.

--For the purpose of the invention, the fibrous substrate weighs preferably not less than 120g/m^2, more preferably between 150 and 180g/m^2 and has a ~~Stoeckgt~~ Stöckigt sizing

degree of preferably not less than 100 seconds, more preferably not less than 200 seconds. A high quality recording medium of the A4 or A3 size can be obtained by using such a fibrous substrate.--

Please amend the paragraph starting at page 10, line 27 as follows.

--The use of such dense and fibrous base material comprising a layer containing barium sulfate prevents drops from ~~drop~~ landing off-target ~~caused by~~ due to swelling of the base material that ~~absorbed~~ absorbs ink in a printing operation and ~~can form~~ provides for formation of images without losing gloss obtained as a result of a casting process. If the fibrous substrate swells in the step of applying water to the produced ink-receiving layer to make it re-swell in the course of manufacturing the recording medium, the surface of the recording medium may not be satisfactorily smoothed when it is pressed against a heated drum. However, the use of a base material comprising a layer containing barium sulfate can effectively prevent such a problem and gives a high gloss to the surface of the recording medium.--

Please amend the paragraph starting at page 12, line 2 as follows.

--Of the above cited binders, gelatin may most suitably be used for the purpose of the invention because the refractive index of barium sulfate and that of gelatin are ~~is~~ close to each other and therefore gelatin can effectively reduce the reflection along the interface thereof and accordingly raise the gloss at 20° of the recording medium. Any type of gelatin processed either by acid or alkali may be used for the purpose of the invention. When gelatin is used in combination with barium sulfate to form a so-called baryta layer, preferably 100 parts by weight

of barium sulfate are compounded with 6 to 12 parts by weight of gelatin ~~by weight~~. If necessary, a cross-linking agent to be used for gelatin such as chromium sulfate, chrome alum, formalin or triazine may be added to the mixture. The cross-linking agent is added preferably to a compounding ratio of between 0.2 to 4 parts by weight based ~~base~~ on 100 parts by weight of gelatin. Chrome alum is preferably used as a cross-linking agent because it can be handled with ease.--

Please amend the paragraph starting at page 13, line 2 as follows.

--The surface layer containing barium sulfate is formed preferably at a coating amount of between 10 and 40g/m^2 in order to make the surface layer reliably absorb the solvent of the ink and show a satisfactory level of surface smoothness. While any appropriate application/drying method may be used for forming the surface layer containing barium sulfate, the formed surface layer is preferably subjected to a finishing process such as a super calender process in order to smooth the surface of the surface layer.--

Please amend the paragraph starting at page 13, line 12 as follows.

--If necessary, the components of the surface layer containing barium sulfate may be prevented from being eluted during the process of forming the ink-receiving layer by subjecting it to a combination of a heat treatment and the use of a thermosetting resin, an acetalifying process and/or a chemical reaction involving a film hardening agent. When forming an ink-receiving layer on the surface layer containing barium sulfate, the coating solution for forming the ink-receiving layer can become whitely opaque if some of the components of the

surface layer containing barium sulfate are ~~is~~ eluted. Then, the ink-receiving layer can partly lose its transparency and become less apt to dry during the process of forming the ink-receiving layer to consequently reduce the surface smoothness and give rise to cracks and other defects. Therefore, the above described process for preventing possible elution of any of the components of the surface layer is preferably used for the purpose of the invention.--

Please amend the paragraph starting at page 14, line 12 as follows.

--When a base material comprising a surface layer containing barium sulfate is used, both the whiteness and the smoothness of the recording medium may depend ~~depends~~ on the surface layer to a large extent. Therefore, preferably, the whiteness and the Bekk smoothness of the surface layer containing barium sulfate are respectively not less than 87% and not less than 400 seconds at the side bearing the ink-receiving layer of the finished recording medium. On the other hand, the Bekk smoothness at the surface of the finished recording medium is preferably not more than 600 seconds, more preferably not more than 500 seconds, because the effect of absorbing the solvent of the recording liquid can be reduced when the smoothness is too high.--

Please amend the paragraph starting at page 15, line 16 as follows.

--For the purpose of the present invention, crystalline aluminum oxide particles are prepared by a method referred to as the Bayer ~~Bayer's~~ process, in ~~with~~ which aluminum hydroxide obtained by processing bauxite, a natural mineral, by means of hot caustic soda is baked to produce aluminum oxide. However, some other method, such as ~~the~~ one in ~~with~~ which pellets of metal aluminum are caused to produce spark discharges in water and the obtained

aluminum oxide is ~~baked~~ baked, or ~~the~~ one in ~~with~~ which an inorganic aluminum salt (e. g., alum) is ~~decomposed~~ decomposed, may alternatively be used for the purpose of the invention.--

Please amend the paragraph starting at page 16, line 10 as follows.

--The average diameter of aluminum oxide particles to be used for the purpose of the invention is preferably not more than 1μm, more preferably not more than 0.3μm, and not less than 80% of all the aluminum oxide particles in the ink-receiving layer preferably have ~~has~~ a diameter of not more than 1μm (i.e., the ~~The~~ percentage of the aluminum oxide particles having a diameter of not more than 1μm based on the total aluminum oxide particles is not less than 80%). When aluminum oxide particles with a diameter greater than 1μm make up ~~occupy~~ more than 20% of all the particles, the re-swelling effect of the ink-receiving layer and the surface smoothing efficiency of the operation of pressing the ink-receiving layer to a hot drum can be reduced as a function of the percentage of such large particles in the process of applying water to re-swell the ink-receiving layer, so that the recording medium may not show a satisfactory gloss.--

Please amend the paragraph starting at page 18, line 3 as follows.

--For the purpose of the present invention, aluminum oxide particles preferably have ~~has~~ a plate-like profile with an average aspect ratio of between 1 and 4. Fibrous aluminum oxide particles with a large aspect ratio are apt to be oriented in a direction parallel to the surface of the base material during the coating process. On the other hand, plate-like aluminum oxide particles are less apt to be oriented during the coating process and hence the pores of the

produced ink-receiving layer have a relatively large volume. For the purpose of the present invention, the average aspect ratio refers to the value obtained by dividing the long axis of the particles in the ink-receiving layer by the short axis. When aluminum oxide is in the form of spherical particles as in the case of colloidal silica, the particles of the ink-receiving layer are apt to be so arranged as to substantially take the closest packing formation.--

Please amend the paragraph starting at page 18, line 21 as follows.

--According to the invention, a coating solution containing particles of aluminum oxide is applied to the surface of a base material to produce a coating layer that eventually makes an ink-receiving layer and the produced coating layer is made to re-swell by means of water. Then, the surface of the coating layer is pressed against a heated mirror-surface drum to dry the coating layer to produce an ink-receiving layer. It is desirable to use small plate-shaped aluminum oxide particles that are ~~poorly apt~~ unlikely to be oriented in order to provide the ink-receiving layer with an intended degree of gloss. When the coating layer shows a structure where partially oriented crystals of plate-shaped aluminum oxide particles are randomly agglomerated, water can quickly penetrate into the gaps of the randomly agglomerated structure to make the coating layer swell easily and rearrange the crystals in the re-swelling process if only a limited amount of water is ~~applied only at a limited amount.~~ applied. Then, the surface of the coating layer can be smoothed effectively when the surface thereof is pressed against a heated mirror-surface drum and dried. At the same time, since the surface of the coating layer swells effectively with a small amount of water applied thereto, steam can escape from the rear surface of the base material only at a low rate in the pressing/drying process so that a dense and very flat

base material can be used for the purpose of the invention. For the above reasons, according to the invention, it is possible to provide a glossy recording medium comprising an ink-receiving layer that scatters light at the surface only to a small extent. Additionally, the ink-receiving layer absorbs ink excellently because the aluminum oxide particles are randomly oriented and hence the pores of the coating layer are hardly crushed during the pressing process.--

Please amend the paragraph starting at page 21, line 7 as follows.

--Therefore, the ink-receiving layer of a recording medium according to the invention provides a remarkable effect only when aluminum oxide particles having a specific profile are used.--

Please amend the paragraph starting at page 25, line 2 as follows.

--The gloss of the surface of the ink-receiving layer of a recording medium according to the invention obtained in the above described manner is so regulated as to be not less than 20% as measured at 20°. For the purpose of the invention, the gloss is measured by a method conforming to JIS-Z-8741. Conventionally, the gloss of the surface of a recording medium is measured at 60°. However, if the surface shows a satisfactory level of gloss as measured at 60°, it may need to be further improved in terms of texture and gloss comparable to those of silver salt photography. This is because the surface of the recording medium does not provide a satisfactory level of gloss at an angle with which the viewer actually sees the image printed on it. According to a study ~~of~~ by the inventors of the present invention, the gloss measured at 20° is vitally important from the viewpoint of providing a high level of gloss and

texture comparable to that of silver salt photography. A recording medium according to the invention and prepared in the above described manner can provide a high level of gloss and texture comparable to that of silver salt photography that cannot be achieved by any known recording medium of the type under consideration, because the surface gloss of the ink-receiving layer is not less than 20% as measured at 20°.--

Please amend the paragraph starting at page 26, line 1 as follows.

--Additionally, a recording medium according to the invention shows an excellent color reproducibility because the particles of aluminum oxide ~~is~~ are electrically positively charged to strongly adsorb the dye of the ink. Still additionally, the ink-receiving layer thereof absorbs ink quite well. As a result, a recording medium according to the invention can provide an image that is comparable to a silver salt photograph in terms of texture and image quality. The ink-receiving layer of a recording medium according to the invention is particularly free from scattered light when a fibrous base material weighing not less than 120g/m^2, having a ~~Stoeckgt~~ Stöckigt sizing degree of not less than 100 seconds and having a layer containing barium sulfate is used, providing the best mode of the recording medium of the invention.--

Please amend the paragraph starting at page 30, line 20 as follows.

--Aluminum ~~octaxide~~ alkoxide was synthetically formed by using a method described in U. S. Patent Nos. 4,242,271 and 4,202,870 and the product was subsequently hydrolyzed to obtain alumina slurry. Thereafter, the obtained alumina slurry was dried to obtain powdery pseudo-beohmite, which was then baked at 500°C for 2 hours in an oven to produce

particulate aluminum oxide having a γ-type crystal structure (to be referred to as γ-alumina hereinafter). The median value of the distributed particle sizes was 20μm. The obtained γ-alumina was dispersed in pure water to make it show a concentration of 20wt% by using acetic acid as a dispersant and subsequently treated in a ball mill for 40 hours. Thereafter, large particles were removed by means of centrifugal separation to obtain treated γ-alumina with an average particle diameter of 0.25μm. The particle at lower 80% of the particle size distribution showed ~~an~~ a particle diameter of 0.76μm.--

Please amend the paragraph starting at page 31, line 20 as follows.

--The dispersed solution 1 was applied to a base material having a surface layer containing barium sulfate (with a Bekk smoothness of 420 seconds and a whiteness degree of 89%) by means of a dye coating method at a coating amount of 30g/m^2 as determined after drying and then the applied solution was dried. The base material had been prepared by applying a baryta composition containing 100 parts by weight of barium sulfate and 10 parts by weight of gelatin onto a fibrous substrate weighing 150g/m^2 and having a ~~Stoeckgt~~ Stöckigt sizing degree of 200 seconds to form a surface layer and subsequently calendaring the surface layer. Thus, the recording medium 1 comprising the base material having the surface layer and the ink-receiving layer was prepared.--

Please amend the paragraph starting at page 32, line 15 as follows.

--Example 2

AKP-G015 (tradename, available from Sumitomo Chemical Industries) was used as a starting material for particulate aluminum oxide. More specifically, the AKP-G015 used as a starting material was γ-alumina with a median value of 2.4μm in the particle size distribution. This starting material was subjected to the same treatment process as that of Example 1 to produce treated γ-alumina. The average particle diameter of the particle size distribution was 0.24μm. The particle at lower 80% of the particle size distribution showed ~~an~~ a particle diameter of 0.49μm. An ink-receiving layer was formed on the surface layer as in Example 1 except that the treated γ-alumina obtained in this example was used. Then, recording medium 3 was prepared by means of the same rewetting cast treatment as the one described above for Example 1.--

Please amend the paragraph starting at page 33, line 24 as follows.

--Example 3

An aqueous dispersed solution containing polyvinyl alcohol (PVA117: tradename, available from Kuraray) and γ-alumina (average particle diameter of 1.5μm) with their respective weight ratio of 15 : 100 in terms of solid matter was prepared. The overall solid matter concentration of the dispersed solution was 12wt%. Then, the dispersed solution was

applied onto the rear surface (opposite to the surface of the ink-receiving layer) of recording medium 2 obtained in Example 1 by means of a dye coater ~~to~~ at a coating amount of 18g/m^2 as determined after drying. Then, the applied solution was dried to obtain recording medium 4 having a back coat layer.--

Please amend the paragraph starting at page 34, line 17 as follows.

--Example 4

The recording medium 4 obtained in Example 3 was cut in pieces with dimensions of 100mm × 148mm, which were as large as post cards. A photographic image was printed on the glossy surface of the ink-receiving layer of each of the post cards by means of an ink-jet printer (BJF-8500: tradename, available from Canon) according to the image information applied thereto and an address was printed on the back coat layer opposite to the ink-receiving layer. The printed image formed on the glossy surface was comparable to a silver salt photograph in terms <u>of</u> texture and image quality, while the address printed on the rear surface was clearly readable because the printed characters ~~were~~ <u>did</u> not ~~bleeding~~ <u>bleed</u> at all. Thus, the post cards worked quite well.